

Unlike Schade, which discloses copolyester compositions that are water dispersible, Applicants' claimed invention is directed to solvent soluble, biodegradable sulfonated aliphatic-aromatic copolymers that form non-brittle films. Schade fails to disclose a single teaching related to solvent soluble copolymers, instead focusing exclusively on water dispersible copolymers, which are not the object of Applicants' claimed invention.

Moreover, claim 1 of Schade requires that the polyesters of the copolyester resin have a molecular weight between 300 and 3000. Schade teaches at column 4, lines 7-9, that "[t]he molecular weights of the resins are, for practical reasons, to be as low as possible, i.e., in a range below 3000, preferably below 2000." As Schade explains at column 4, lines 13-27 a resin having a low molecular weight is desired because 1) "the higher the molecular weight of the resin ..., the more slowly the melt viscosity of the resins decreases as the temperature rises above its softening point", and a resin having a low melt viscosity is desired so that simple vats equipped with anchor stirrers and heaters will be adequate to prepare the polyester resin dispersions of Schade, and 2) the hydroxyl number of the polyesters, which "should not fall below about 35 if [a] perfect setting is to be assured", "diminishes as the molecular weight increases."

In contrast, claim 1 of Applicants' invention requires the copolymers to have an "inherent viscosity equal to or greater than about 0.3 dL/g." The Applicants further teach at page 3, lines 22-25 that their copolymers are required to have an "IV equal to or greater than about 0.3 dL/g, such as above about 0.4 or above about 0.5 dL/g." Applicants respectfully assert that a person of ordinary skill in the art would readily understand through Mark-Houwink calculations and the abundance of molecular weight/inherent viscosity teachings within the art that a poly(ethylene terephthalate) having an IV of 0.3 dL/g would have an average molecular weight of greater than 5000, which is a molecular weight substantially larger than the 300-3000 molecular weight requirement of Schade. Although the molecular weight-inherent viscosity relationship is dependent on the exact chemical composition of the copolymer, Applicants believe that the large difference between the molecular weight teachings of Schade and the IV teachings of the present invention do not allow the molecular weights of the two inventions to overlap. As a result, Schade does not anticipate the novel copolymers of Applicants' claimed invention because Schade only claims/discloses polyesters having a molecular weight between 300

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and 3000, and not copolymers having Applicants' claimed "inherent viscosity of equal to or greater than about 0.3dL/g", which correlates to an average molecular weight greater than 3000.

The Examiner further cites Examples 3 and 4 as disclosing Applicants' claimed invention. Example 3 of Schade, however, does not disclose that an aliphatic dicarboxylic acid, which is required by Applicants in claim 1 to prepare their novel polyester composition, is incorporated into the polyester resins of Example 3. In addition, although Example 4 discloses that 10 mole percent of isophthalic acid is used to prepare a polyester resin according to Schade, Applicant's expressly require that "20 to about 60 mole percent ... of one or more of isophthalic dicarboxylic acids or an alkyl diester thereof" be utilized to produce the novel polyester composition according to their invention (see claim 1). Even further, Applicants disclose in Comparative Example CE 2, on pages 8-9, that using only 10 mole percent of isophthalic acid, as was used in Example 4 of Schade, does not produce a polyester composition that is soluble in solvent, and Applicants specification expressly states that solvent solubility is one of the desired aspects of the present invention because such solvent solubility advantageously allows for the solvent casting of coating and films from the claimed copolymers. Applicants have designed the copolymers of their claimed invention to be solvent soluble so that the non-brittle films and shaped articles produced from polymer solutions of their copolymers also exhibit improved biodegradability. As a result, in order to achieve the solvent soluble, biodegradable sulfonated aliphatic-aromatic copolymers of Applicants claimed invention, the aliphatic dicarboxylic acid that is missing from Example 3 of Schade, and the 20-60 mole percent of isophthalic dicarboxylic acid that is missing from Example 4, must be present as set forth by Applicants in claim 1. Therefore, because neither Example 3, nor Example 4 contain all the elements of Applicants claimed invention, Schade does not anticipate Applicants' claimed invention, and withdrawal of the rejection under 35 U.S.C. 102(b) as to claims 1-4 and 7-12 is respectfully requested.

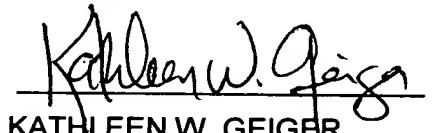
Summary

In view of the foregoing remarks, Applicants submit that the rejection under 35 U.S.C. 102(b) and the objection to claims 5 and 6 have been properly traversed, and that a full and complete response has been made to the outstanding Office Action. A

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Notice of Allowance is respectfully solicited. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Respectfully submitted,



KATHLEEN W. GEIGER

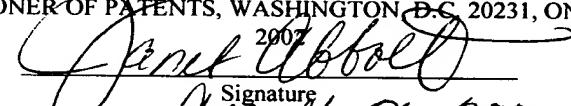
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DATED: AUGUST 22, 2002

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